IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF MISSOURI SOUTHWESTERN DIVISION

SHORT CREEK DEVELOPMENT, LLC, et al.,	)	
Plaintiffs,	)	
vs.	)	**No. 22-05021-CV-SW-WBG**
MFA INCORPORATED,	)	
Defendant.	)	

ORDER AND OPINION SETTING FORTH FINDINGS OF FACTS AND CONCLUSIONS OF LAW ON THE ISSUE OF DIVISIBILITY OF HARM

On October 2, 2023, the Court conducted a bench trial solely on the issue of Defendant's divisibility of harm defense to Plaintiffs' CERCLA claim. Pursuant to Rule 52(a) of the Federal Rules of Civil Procedure, and based on the evidence and arguments presented, the Court makes the following findings of fact and conclusions of law.

I. FINDINGS OF FACT

A. Ownership and Operations of the Plant and Site

(1) MFA

Missouri Farmers Association, Inc., now known as Defendant MFA Incorporated (collectively, "MFA"), purchased two tracks of land near Joplin, Missouri in 1953 and purchased a third parcel in mid-1954. Between 1953 and late 1954, MFA constructed a fertilizer plant ("the Plant") on a portion of the three parcels. In or about late 1954, the Plant became operational, and by Spring 1955, it was in full production.

At the Plant, MFA manufactured fertilizer with nitrogen, phosphate,[1] and potassium available in a granulated product. The Plant used phosphoric acid to manufacture the fertilizer. To make phosphoric acid, the Plant piped sulfuric acid from the neighboring Eagle-Picher plant and obtained phosphate rock from Florida. Phosphogypsum was a byproduct of the process of making phosphoric acid.

The phosphogypsum, first produced at the Plant in January 1955, was placed in an area immediately to the south-southeast of the Plant.[2] This area is a portion of what is now known as 420 South Malang Road, Joplin, Missouri (hereinafter, "Site"). MFA owned and operated a portion of the Site but never owned or operated the entire Site.

In June 1955, MFA closed the Plant due to a strike by Florida phosphate laborers. The Plant returned to production sometime between August 1955 and October 1955. MFA continued to operate the Plant through March 31, 1957. The Plant, while MFA operated it, produced fertilizer for a total of twenty-five to twenty-seven months. During MFA's operation of the Plant, between approximately 157,000 and 224,000 tons of phosphogypsum were produced and placed on the Site, forming a gypstack.[3] The gypstack was placed on top of mining wastes, which were the result of extensive lead and zinc mining predating MFA's ownership and operation of the Plant. These mining wastes contained cadmium, copper, iron, lead, nickel, and zinc.[4]

[1] Phosphate is the most common molecular form of phosphorous. Doc. 105 at 23. The ore material for phosphate is apatite, which is the most common mineral group of phosphate on the Earth's surface. *Id*. at 24.

[2] January 1955 was the first time phosphogypsum was introduced to the Site.

[3] The approximate amount of phosphogypsum was extrapolated from quantities of fertilizer produced, fertilizer sold, phosphoric acid generated, and/or sulfuric acid purchased by and delivered to the Plant. Also, the estimated range of phosphogypsum produced was based on assumptions about the phosphate's purity and the Plant's production rate.

[4] The mining wastes are the subject of the EPA's efforts at the Oronogo-Duenweg Mine Belt Superfund Site.

(2) FCC

On April 1, 1957, Farmers Chemical Company ("FCC") became the owner and operator of the Plant. FCC was formed pursuant to an agreement between MFA and Consumer Cooperative Association ("CCA"). The agreement between MFA and CCA provided, in relevant part, for (1) FCC's creation; (2) joint ownership of FCC by MFA (60%) and CCA (40%); (3) MFA's sale of more than 300 acres to FCC; (4) MFA's sale to FCC of the Plant and all other buildings, machinery, equipment, inventories of raw materials, fertilizers, and other assets on the property; and (5) MFA's indemnification of CCA and FCC against all claims, losses, costs, and expenses connected with the Plant's operation before April 1, 1957.

In 1959, CCA, which had acquired 75% of FCC, became the majority owner. In 1961, FCC acquired two additional, adjacent parcels. One parcel was located directly south of the Plant and encompassed the western portion of the Site's gypstack. Between March 1962 and October 1962, the Plant was expanded, and its production capability exceeded 150,000 tons of fertilizer per year. In October 1962, CCA owned 77% of FCC. In August 1966, CCA changed its name to Farmland Industries, Inc. ("Farmland").

On September 1, 1970, Farmland became the sole owner of FCC. In December 1971, the Plant ceased production of phosphoric acid. Between April 1957 and December 1971, the Plant generated between approximately 2,540,000 and 2,957,000 tons of phosphogypsum, which were placed on the gypstack.[5] No phosphogypsum was added to the gypstack after December 1971. The gypstack covers approximately 54 acres and varies in depth from a few feet on the southern

[5] The estimated amount of phosphogypsum produced was extrapolated from the amount of sulfuric acid provided to the Plant. The estimated amount also assumed the Plant's production capacity doubled in 1962, and the Plant's production rate was 85% or 100%.

boundary to as much as 60 feet on the northwest boundary. As of 2001, the gypstack contained roughly 2,700,000 tons of phosphogypsum.

(3) FCC's Merger with Farmland and Farmland's Bankruptcy

In 1999, FCC merged with Farmland. As a result, Farmland assumed FCC's debts, liabilities, duties, and obligations. In 2000, Farmland sold the Plant to PCS Phosphate Company, Inc., but Farmland retained ownership of the Site. In 2002, Farmland filed a voluntary petition for protection under Chapter 11 of the United States Bankruptcy Code in the United States Bankruptcy Court for the Western District of Missouri. *In re Farmland Indus.*, No. 02-50557-jwv11 (Bankr. W.D. Mo. 2002). In 2003, the Bankruptcy Court confirmed Farmland's Second Amended and Restated Plan of Liquidation ("Plan"). Contemporaneously, Farmland's corporate existence terminated.

Pursuant to the Plan, the FI Missouri Remediation Trust ("FIMRT") was formed as a Qualified Settlement Fund pursuant to section 468(b) of the Internal Revenue Code to address and manage the leachate emanating from the gypstack.[6] FIMRT's initial corpus was comprised of, *inter alia*, title to the Site and $5,509,808 in remediation funds.

(4) Short Creek Development, LLC and Short Creek Advisors, LLC

In September 2021, Plaintiff Short Creek Development, LLC ("SCD") purchased the Site from FIMRT, and it remains the owner of the Site. Pursuant to the agreement governing the Site's sale, SCD unconditionally assumed all environmental liabilities associated with the Site. SCD collateralized and secured its assumed environmental liabilities by placing the residual cash balance of FIMRT's corpus in escrow. The escrow's beginning balance was $1,580,651.29.

[6] Section I(B) discusses leachate in further detail.

FIMRT also executed an agreement assigning its claims to Plaintiff Short Creek Advisors, LLC ("SCA"). Accordingly, SCA is the holder of all right, title, and interest in the Site. FIMRT terminated by its own terms no later than December 31, 2021.

B. Leachate, Environmental Concerns, and Remedial Measures

Phosphogypsum primarily consists of gypsum and phosphate. Additionally, it contains, *inter alia*, arsenic, low-level radionuclides, selenium, zinc, cadmium, fluoride, sodium, potassium, chloride, nitrates, ammonia, sulfate, sulfuric acid, phosphoric acid, and hydrofluoric acid. When precipitation falls, the water percolates through the gypstack and the area around the gypstack, drawing out components of the gypstack and the surrounding area. The resulting liquid is referred to as leachate. The leachate contacts surface water and groundwater.

Both the United States Environmental Protection Agency ("EPA") and the Missouri Department of Natural Resources ("MDNR") have required remediation of the leachate. By no later than 2004, a wastewater treatment system was operational at the Site. In 2009, MDNR determined a leachate management system should be constructed. The leachate management system, constructed in 2012, captures and recirculates leachate through an infiltration array. Since 2021, SCD has operated the leachate management system. Consequently, SCD has incurred and continues to incur costs related to the management of the leachate.[7]

After 2012, the EPA placed mining wastes and soil contaminated with heavy metals, including galena, on top of the gypstack.[8] Between 2012 and 2021, samples were taken routinely

[7] In March 2022, MDNR presented a draft Administrative Order on Consent ("AOC") naming both SCD and MFA as Respondents. The AOC was intended to address ongoing remedial activities related to the leachate and the long-term stewardship of the gypstack. In July 2023, MDNR presented a revised draft AOC, naming only SCD as the Respondent and adding a stipulated penalty provision for noncompliance. SCD and MDNR continue to negotiate the terms of the revised AOC.

[8] The EPA used the Site to place contaminated soils and mine waste that were incident to the cleanup efforts after the 2011 Joplin tornado. In November 2021, EPA ceased using the gypstack in this manner. The EPA is designing a cap for the contaminated soil and mine waste it placed on the gypstack.

from the surface water near the Site. The samples revealed the presence of ammonia, phosphorus, fluoride, sulfate, aluminum, cadmium, calcium, iron, lead, nickel, and zinc. In 2021, leachate samples showed increased levels of, among other things, calcium, zinc, cadmium, fluoride, and phosphate. The leachate was also acidic, with a pH balance of 4.89. Environmental concerns surrounding the leachate include, *inter alia*, high concentrations of phosphate and fluoride, the presence of heavy metals and radioactive particles, and the potential production of radon gas.

II. PROCEDURAL HISTORY

In March 2022, SCD and SCA filed this lawsuit against MFA seeking relief under (1) the Comprehensive Environmental Response, Compensation, and Liability Action of 1980, 42 U.S.C. § 9607(a) ("CERCLA"); and (2) section 7002(a) of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 and further amended by the Hazardous and Solid Waste Amendments of 1984 ("RCRA"). Doc. 1. In March 2023, the parties filed cross-motions for summary judgment on MFA's liability under CERCLA. Docs. 59-60.[9] SCD and SCA argued MFA was jointly and severally liable for response costs associated with the Site. Doc. 59. MFA maintained the environmental harm at the Site was divisible. Doc. 60. SCD also moved for a permanent injunction. Doc. 57.

In August 2023, the Court denied both parties' motions for summary judgment on the issue of divisibility of environmental harm under CERCLA. Doc. 75. In denying the motions, the Court found it could not determine, based on the parties' filings, whether the environmental harm could

[9] MFA also sought summary judgment with respect to the date on which any prejudgment interest began to accrue. Doc. 60; Doc. 61 at 16-17. Plaintiffs conceded any prejudgment interest began to accrue on October 8, 2021. Doc. 67 at 19. Thus, the Court granted MFA's motion on this issue. Doc. 75 at 5.

be divided. *Id*. at 5-13.[10] The Court also denied without prejudice SCD's motion for permanent injunction, finding it was prematurely filed. *Id*. at 13-14.

On October 2, 2023, the Court conducted a bench trial on the issue of divisibility of environmental harm. Doc. 102, 105. On October 26, 2023, the parties stipulated to the dismissal with prejudice of Plaintiffs' RCRA claims, and SCD's request for a declaratory judgment under CERCLA. Doc. 107; *see also* Doc. 109. The only remaining claim is Plaintiffs' CERCLA claim for recovery of costs. At this juncture, the Court issues the following conclusions of law solely related to divisibility of environmental harm under CERCLA.

III. CONCLUSIONS OF LAW

To establish liability under CERCLA, a plaintiff must show (1) the site is a "facility," (2) a release or "threatened release" of a "hazardous substance" from the site has occurred, (3) the release or threatened release caused the plaintiff to incur response costs, and (4) the defendant falls within one of four classes of responsible persons. *United States v. Aceto Agr. Chems. Corp.*, 872 F.2d 1373, 1378-79 (8th Cir. 1989) (citations omitted); 42 U.S.C. § 9607(a). The parties have stipulated the Site is a facility, there has been a release or threatened release of a hazardous substance at the Site, SCD has incurred response costs, and both MFA and Farmland[11] fall within a class of responsible persons. Doc. 85 at 4-5. Based on the parties' stipulations, the Court concludes MFA is liable to Plaintiffs under section 107(a) of CERCLA.

CERCLA generally provides for joint and several liability. *See United States v. Dico*, 920 F.3d 1174, 1181 (8th Cir. 2019) (citation omitted). But liability may be divided "according to the

[10] The Court utilizes the pagination CM/ECF automatically applies to filings, which may differ from the pagination used by the parties.

[11] Farmland was previously known as CCA, CCA was an owner of FCC, and FCC merged with and into Farmland. To avoid confusion, the Court refers to CCA, FCC, and Farmland collectively as Farmland, unless otherwise specified.

portion of the underlying environmental harm each [responsible party] caused." *Von Duprin LLC v. Major Holdings, LLC*, 12 F.4th 751, 758 (7th Cir. 2021) (citing *Burlington N. & Santa Fe Ry. Co. v. United States*, 556 U.S. 599, 613 (2009)). In CERCLA cases, "[t]he universal starting point for divisibility of harm analyses . . . is the Restatement (Second) of Torts." *United States v. Hercules, Inc.*, 247 F.3d 706, 717 (8th Cir. 2001) (citing Restatement (Second) of Torts § 433A (1965)). The Restatement "provides for the apportionment of damages among two or more parties when at least one is able to show either (1) distinct harms or (2) a reasonable basis for determining the contribution of each cause to a single harm." *Id*. (citation and internal quotation marks omitted). Here, the parties agree there is a single environmental harm – the leachate. But the parties dispute whether the environmental harm may be divisible.

A. Legal Standard for Divisibility of Harm under CERCLA

The Court must first determine whether the environmental harm is capable of apportionment. *United States v. NCR Corp.*, 688 F.3d 833, 838 (7th Cir. 2012) (citing *Burlington N.*, 556 U.S. at 614). The environmental harm is the site's entire contamination "that has caused or foreseeably could cause a party to incur response costs, suffer natural resource damages, or sustain other types of damages cognizable under section 107(a)(4)." *Pakootas v. Teck Cominco Metals, Ltd.*, 905 F.3d 565, 592 (9th Cir. 2018) (citations omitted); *see also Burlington N.*, 556 U.S. at 616 (observing "harm" in a response cause of action refers to "the overall site contamination requiring remediation."). Whether an environmental harm can be divided is a question of law, although a court's decision rests on underlying findings of fact. *NCR Corp*., 688 F.3d at 838; *Hercules*, 247 F.3d at 718.

As the defendant, MFA bears the burden of demonstrating, by a preponderance of the evidence, there is a reasonable basis for divisibility of harm. *See Hercules*, 247 F.3d at 717

(citation omitted). Proving divisibility of harm is a "very difficult proposition." *Id*. (quoting *Control Data Corp. v. S.C.S.C. Corp.*, 53 F.3d 930, 934 n.4 (8th Cir. 1995)). While the commingling of pollutants "is not synonymous with indivisible harm," some courts have found the commingling of pollutants creates "a rebuttable presumption of such harm." *Pakootas*, 905 F.3d at 592-93; *see also United States v. Alcan Aluminum Corp.*, 990 F.2d 711, 722 (2d Cir. 1993).

To support divisibility of a single harm, the evidence "must be concrete and specific." *Hercules*, 247 F.3d at 718 (citation omitted). It must be "clear that each [defendant] has caused a separate amount of harm, limited in time, and that neither has any responsibility for the harm caused by the other." *Id*. (quoting *In re Bell Petroleum Servs., Inc.*, 3 F.3d 889, 895 (5th Cir. 1993)). But the basis for divisibility does not need to be mathematically precise. *PCS Nitrogen Inc. v. Ashley II of Charleston LLC*, 714 F.3d 161, 183 (4th Cir. 2013).

"The nature of the harm is the key factor." *Bell Petroleum Servs.*, 3 F.3d at 895; *see also Pakootas*, 905 F.3d at 591. A court considers, among other things, the types of pollution, contributors to the pollution, and the how the pollutants present themselves in the environment after discharge. *Von Duprin*, 12 F.4th at 763; *NCR Corp.*, 688 F.3d at 838. Divisibility of a single harm is possible if the court can "discern the degree to which different parties contributed to the damage." *Hercules*, 247 F.3d at 718.

If the court determines the environmental harm is capable of being divided, "the actual apportionment of damages is a question of fact." *Hercules*, 247 F.3d at 718. Significantly, a court cannot consider equitable factors when determining divisibility of harm. *Id*. (citation omitted); *see*

also Burlington N., 556 U.S. at 615 n.9. The court's divisibility determination is guided "by principles of causation alone." *Hercules*, 247 F.3d at 718 (citation omitted).[12]

If causation is unclear, the court may "not make an arbitrary apportionment." *United States v. Vertac Chem. Corp.*, 453 F.3d 1031, 1040 (8th Cir. 2006) (citation omitted); *Hercules*, 247 F.3d at 718 ("[W]here causation is unclear, divisibility is not an opportunity for courts to 'split the difference' in an attempt to achieve equity."). If in doubt, the court "should not settle on a compromise amount" it thinks "best approximates the relative responsibility of the parties." *Hercules*, 247 F.3d at 718 (citation omitted). Instead, the Court should impose joint and several liability. *Id*. at 718-19 (citation omitted).

B. Volumetric Divisibility of Harm

MFA contends the environmental harm can and should be divided based on the amount of phosphogypsum MFA and Farmland each placed on the gypstack.[13] Volumetric contributions provide a reasonable basis for divisibility of harm "only if it can be reasonably assumed, or it has been demonstrated, that independent factors had no substantial effect on the harm to the environment." *United States v. Monsanto Co.*, 858 F.2d 160, 173 n.27 (4th Cir. 1988) (citation omitted); *see also Pakootas*, 905 F.3d at 593 (observing "physical aggregation can cause disproportionate harm that is not linearly correlated with the amount of pollution attributable to

[12] While not considered when determining divisibility of harm, a court considers equitable factors when allocating response costs. *See Control Data Corp.*, 53 F.3d at 935; *see also* 42 U.S.C. § 9613(f). Relevant here, these factors include, but are not limited to, a party's involvement in the production of hazardous waste and the amount of hazardous waste involved. *Id*. (citation omitted). As noted by the Eighth Circuit, "[t]hose parties who can show that their contribution to the harm is relatively small in terms of amount of waste, toxicity of the waste, involvement with the waste, and care, stand in a better position to be allocated a smaller portion of response costs." *Id*.

[13] In its summary judgment motion, MFA also suggested the environmental harm was divisible based on time. *See* Doc. 61 at 12-13, 15-16. In denying MFA's summary judgment motion, the Court found chronological divisibility required further development of the facts, and therefore, summary judgment was improper. Doc. 75 at 9. During the bench trial on divisibility of harm, MFA focused on volumetric/mass divisibility. *See* Doc. 105 at 10, 28-33, 43-45, 52-55, 91-98, 100-01. Likewise, MFA's trial brief argues and its proposed conclusions of law propose the harm is divisible based on the amount of phosphogypsum produced by MFA and by Farmland. Doc. 99 at 1, 4-6; Doc. 100 at 13. Consequently, MFA appears to have abandoned its chronological divisibility argument.

each source."). The proponent of volumetric divisibility must show "a relationship between waste volume, the release of hazardous substances, and the harm at the site." *Monsanto*, 858 F.2d at 172; *see also Pakootas*, 905 F.3d at 595. To satisfy its burden, the proponent may present "proof disclosing the relative toxicity, migratory potential, degree of migration, and synergistic capacity of the hazardous substances at the site." *Alcan Aluminum Corp.*, 990 F.2d at 722 (citations omitted); *see also Pakootas*, 905 F.3d at 595; *Monsanto*, 858 F.2d at 172 n.26.

(1) Production of Phosphogypsum

MFA did not produce any records establishing the amount of phosphogypsum placed on the gypstack by MFA or by Farmland. Rather, MFA provided estimated amounts of phosphogypsum produced by MFA and by Farmland. MFA's expert witness, Matthew Pasek, Ph.D., calculated the estimated ranges of phosphogypsum produced. Doc. 99-1 at 6-15.[14] His calculations were based on the quantity of fertilizer produced or sold, amount of phosphoric acid generated, and/or amount of sulfuric acid purchased by and delivered to the Plant. *Id.*; Doc. 105 at 57-58. Also, his calculations were based on assumptions about the purity of the phosphate utilized, the Plant's production rate, and the Plant's production capacity. Doc. 99-1 at 6-15.

The parties stipulated to the estimated ranges of phosphogypsum placed by MFA (between 157,000 and 224,000 tons) and by Farmland (between 2,540,000 and 2,957,000). Doc. 85 at 2-3. The parties also agreed the phosphogypsum produced by MFA had the same general composition as the phosphogypsum produced by Farmland. Doc. 99-1 at 19-20; Doc. 105 at 58; Pl.'s Ex. 1 at 21. And the parties concur the environmental harm caused by the phosphogypsum – regardless of

[14] Dr. Pasek's Supplemental Expert Report was provided to the Court with MFA's trial brief. Docs. 99, 99-1. This supplemental report was also admitted into evidence during the bench trial as Defendant's Exhibit 199. To avoid any confusion, the Court cites the supplemental report as filed on CM/ECF.

which entity placed it – is the same: leachate. *See* Doc. 97 at 6-8; Doc. 99 at 4; Doc. 99-1 at 19-25; Doc. 105 at 62-63.

MFA's divisibility of harm defense is based on the estimated amount of phosphogypsum it produced between January 1955 and March 31, 1957. *See* Docs. 99, 99-1. According to Dr. Pasek, MFA produced between six and eight percent of the total phosphogypsum on the Site, and therefore, MFA is responsible for six to eight percent of the environmental harm caused by the gypstack. Doc. 99 at 4-10; Doc. 99-1 at 6, Doc. 105 at 28-33, 43-45, 52-58. MFA further contends, based on Dr. Pasek's opinion, Farmland produced between 92 and 94% of the total phosphogypsum on the Site; thus, Farmland is responsible for 92 to 94% of the environmental harm. *Id*.

As explained *supra*, environmental harm may be divided based on volumetric or mass contributions if the proponent demonstrates "independent factors had no substantial effect on the harm to the environment" and establishes a relationship between the pollutant's volume/mass, the release of the pollutant, and the environmental harm at the site. *See Pakootas*, 905 F.3d at 593-95; *Monsanto*, 858 F.2d at 173 n.27. In reaching his divisibility of harm opinion, Dr. Pasek conceded several factors – i.e., attenuation, additional phosphogypsum, mining wastes, and the leachate management system – would affect the phosphogypsum produced and placed by MFA. But, as discussed below, his opinion did not account for these factors.

(2) Attenuation of Phosphogypsum

Dr. Pasek opined the phosphogypsum produced by MFA would attenuate much faster than the phosphogypsum Farmland produced. Doc. 99-1 at 26, 29-30. He explained the problematic materials in phosphogypsum – i.e., phosphorus, fluoride, acidity, and trace metals – "have absolute quantities that decrease over time as water flows through a phosphogypsum stack, removing these

components." *Id*. at 19. As the water lessens these materials, the environmental impact decreases. *Id.* Based solely on the estimated amounts of phosphogypsum produced by MFA and by Farmland, Dr. Pasek concluded the phosphogypsum produced by Farmland would take "ten times as long to attenuate . . . compared to the [phosphogypsum] placed by MFA." *Id*. at 26, 29-30; *see also* Doc. 105 at 50.

But Dr. Pasek's conclusion suggests two separate gypstacks – one from MFA, and one from Farmland – unaffected by other factors. *Id*. at 26, 28-30. He did not consider phosphogypsum being added to MFA's gypstack, mining wastes being placed on top of the gypstack, or the leachate management system. *Id*. at 26, 28-30; *see also* Doc. 105 at 48-50. These events, as Dr. Pasek opined, "impacted the state of the phosphogypsum leachate water," which is the environmental harm in this case. *Id*. at 28-30; *see also* Doc. 105 at 48-50. Regardless, Dr. Pasek did not account for phosphogypsum's attenuation and any independent factors that would have affected phosphogypsum's attenuation when opining on the divisibility of harm.

(3) Farmland's Addition of Phosphogypsum

Dr. Pasek concluded "[t]he addition of fresh by-product material to an existing stack results in the precursor materials retaining pollutants for longer than it would if no additional material were added." Doc. 99-1 at 27. He opined Farmland's placement of phosphogypsum on the gypstack created by MFA "would have exacerbated the pollutants in the phosphogypsum laid down by MFA." *Id*. at 28; Doc. 105 at 63. Moreover, in both his report and during the trial, Dr. Pasek represented the phosphogypsum placed by MFA "may appear to be more problematic than even the younger material." Doc. 99-1 at 28; Doc. 105 at 63-64. Despite Dr. Pasek's determination that Farmland's phosphogypsum would exacerbate MFA's phosphogypsum or render MFA's phosphogypsum more problematic, MFA provided no evidence establishing the phosphogypsum

it placed on the gypstack was (or was not) exacerbated by or more problematic than the phosphogypsum placed by Farmland.[15]

(4) Mining Wastes

Dr. Pasek informed the Court that the mining wastes the EPA placed on top of the gypstack impacted the phosphogypsum's attenuation and the leachate. Doc. 99-1 at 28-30; Doc. 105 at 50-51, 55. He stated, "[t]he addition of mining waste, in particular sulfide-bearing mining waste, to the gypstack, has generated acidic leachate fluids." Doc. 99-1 at 29. According to Dr. Pasek, certain minerals "react with water to generate sulfuric acid, resulting in acid mine drainage." *Id*. "The decrease in pH causes continuous dissolution of phosphate and fluoride into the gypstack leachate water." *Id*.

These factors, however, was not considered by Dr. Pasek when he opined that the environmental harm was divisible based on the amount of phosphogypsum produced by MFA and by Farmland. *See id*. at 4-15, 28-30. Moreover, MFA provided no evidence regarding the interaction between the phosphogypsum produced by MFA with these mining wastes, and how that interaction differs from the reaction between the mining wastes and the phosphogypsum produced by Farmland.[16]

(5) Leachate Management System

Dr. Pasek also opined the leachate management system impacts the phosphogypsum's attenuation. *Id*. at 28; *see also* Doc. 105 at 52, 64. This process, according to him, "prevents removal of soluble phosphate and fluoride, and keeps pH persistently acidic, instead of allowing

[15] When asked during trial if he could quantify or provide a numeric value demonstrating the exacerbation, Dr. Pasek stated "there are papers that have investigated this exacerbation" related to "phosphogypsum stacks in general." Doc. 105 at 64. But he was unaware of any "detailed scientific investigation of the Joplin site." *Id*.

[16] At trial, Dr. Pasek conceded he did not quantify mining wastes' impact on the environmental harm. Doc. 105 at 66.

the soluble components to wash out." Doc. 99-1 at 28; Doc. 105 at 52. As a result, Dr. Pasek concluded the gypstack remains "in stasis" with the system, and the gypstack's aging is "less effective." Doc. 99-1 at 28; Doc. 105 at 52-55. MFA provided no data or evidence demonstrating the leachate management system's impact on the environmental harm.[17]

Based solely on the amount of phosphogypsum produced by MFA and by Farmland, Dr. Pasek concluded the environmental harm is divisible, and MFA is responsible for six to eight percent of the environmental harm.[18] But, as explained above, Dr. Pasek did not account for independent factors that he identified as affecting the phosphogypsum placed by MFA and the leachate. Further, MFA provided no evidence of a direct correlation between the amount of phosphogypsum it produced and the environmental harm. Based on the foregoing, the Court finds MFA has not demonstrated, by a preponderance of the evidence, that the amount of phosphogypsum produced by MFA and by Farmland is a reasonable basis for divisibility of harm.

(6) Other Contributors to the Environmental Harm

In addition to the foregoing, the entire site contamination requiring remediation must be considered. *Burlington N.*, 556 U.S. at 616 (observing the harm is "the overall site contamination requiring remediation."). Here, the environmental harm is the leachate. MFA's expert identified five contributors to the environmental harm: MFA, Farmland, FIMRT, EPA, and SCD. Doc. 99-1 at 28. But MFA only introduced evidence about two contributors – MFA and Farmland. It did

[17] During trial, Dr. Pasek was asked what percentage of the environmental harm would be attributable to the leachate management system. Doc. 105 at 65. He testified he would have to look at the scientific literature to calculate the change attributable to the leachate management system, but he had not done so. *Id*.

[18] MFA's trial brief confirmed Dr. Pasek's calculations were "solely based on total volume, and do not account for the timing of placement and effects on the Gypstack and its constituencies." Doc. 99 at 5 n.6 (citation omitted). MFA's trial brief also recognized Dr. Pasek's opinion did not account for the mining wastes that was placed on the gypstack by the EPA. *See id.* at 6 n.8.

not present evidence as to how much of the environmental harm is attributable to the other contributors.

In fact, during trial, Dr. Pasek conceded he did not calculate what percentage of the environmental harm was attributable to the leachate management system, which was operated initially by FIMRT and later by SCD. Doc. 105 at 65. He admitted he would have to study the scientific literature to calculate the impact the leachate management system had on the environmental harm, and he had not studied the literature. *Id*. Dr. Pasek also testified he did not determine what percentage of the environmental harm was attributable to the EPA, which placed mining wastes on top of the gypstack. *Id*. at 66. Without evidence about each contribution to the environmental harm, the Court cannot divide the harm. For this additional reason, the Court finds MFA has not demonstrated, by a preponderance of the evidence, a reasonable basis for divisibility of harm.

(7) Environmental Impact Regardless of Farmland's Addition to the Gypstack

When one party's placement of a pollutant is sufficient by itself to create a condition hazardous to human health, divisibility of harm is inappropriate. *NCR*, 688 F.3d at 839. Plaintiff's expert, Adam H. Love, Ph.D., opined the phosphogypsum's "environmental impact would have resulted from either operator's waste disposal, therefore, the relative contribution of mass or volume does not apply to the divisibility of harm." Pl.'s Ex. 1 at 21; *see also* Doc. 105 at 81-86, 97-98. MFA did not present any evidence rebutting Dr. Love's opinion. Nor did MFA demonstrate its contribution of phosphogypsum alone would have resulted in different remedial measures. *See NCR*, 688 F.3d at 839. Accordingly, the Court concludes MFA has not shown, by a preponderance of the evidence, a reasonable basis for divisibility of harm.

(8) Whether MFA was an Owner or Operator after March 31, 1957

One issue that remains undeveloped is what role, if any, MFA played in FCC or at the Plant between April 1, 1957 and August 31, 1970. Although FCC became the owner and operator of the Plant on April 1, 1957, MFA owned 60% of FCC at that time. It appears MFA continued to be a majority owner until 1959. Between sometime in 1959 and August 31, 1970, MFA was a minority owner of FCC. It was not until September 1, 1970 that MFA no longer had an ownership interest in FCC. Phosphogypsum was produced at the Plant during the time MFA had an ownership interest in FCC. Depending on MFA's role in FCC and/or at the Plant, MFA could be liable for the phosphogypsum produced and placed on the gypstack during the time it had an ownership interest in FCC.

"Liability for the release of hazardous substances may be imposed on any person who at the time of disposal of any hazardous substance *owned or operated* any facility at which such hazardous substances were disposed of." *K.C.1986 Ltd. P'ship v. Reade Mfg.*, 472 F.3d 1009, 1020 (8th Cir. 2007) (citation and internal quotation marks omitted). An owner or operator is "any person[19] who owned, operated, or otherwise controlled activities at such facility . . . ." 42 U.S.C. § 9601(20)(A)(iii). Someone "who, without participating in the management of a . . . facility, holds indicia of ownership primarily to protect his security interest in the . . . facility" is not considered an owner or operator. *Id*.

At the bench trial on divisibility of harm, the Court inquired about MFA's role once FCC was created. Doc. 105 at 108-11. While the parties agree MFA was a shareholder and board member of FCC, no evidence was presented demonstrating MFA was (or was not) an owner or

[19] A person is defined as "an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, United States Government, State, municipality, commission, political subdivision of a State, or any interstate body." 42 U.S.C.A. § 9601(21).

operator during the timeframe identified above. Thus, even if the Court were to find the amount of phosphogypsum produced was a reasonable basis for dividing the environmental harm, the Court would be unable to determine the percentage of the environmental harm for which MFA was responsible. During the upcoming bench trial on damages, the Court expects the parties to address the issue of MFA's role in FCC and at the Plant between April 1, 1957 and August 31, 1970.

IV. CONCLUSION

In accordance with the foregoing discussion, the Court finds MFA is jointly and severally liable under CERCLA. Pursuant to Rule 52(c) of the Federal Rules of Civil Procedure, the Court declines to enter a judgment on the issue of divisibility of harm until the close of the evidence.

IT IS SO ORDERED.

DATE: December 6, 2023

/s/ W. Brian Gaddy
W. BRIAN GADDY
UNITED STATES MAGISTRATE JUDGE